

What is claimed is:

1. A liquid crystal display device comprising:
a first substrate;

5 a structure formed on the first substrate to
have a linear shape or a shape formed by combining
plural straight lines;

a resist film formed on the structure, and on a
surface of which a wrinkle-like roughness extending
in a substantially same direction as the structure
10 is provided;

a reflective electrode formed on the resist
film and having an roughness that follows the
surface of the resist film;

15 a second substrate arranged to oppose to the
first substrate; and

a liquid crystal sealed between the first
substrate and the second substrate.

2. A liquid crystal display device according to
claim 1, wherein the structure is formed by a
photoresist.
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3. A liquid crystal display device according to
claim 1, wherein the structure is formed by same
material as a wiring that supplies a signal to the
reflective electrode.

25 4. A liquid crystal display device according to
claim 1, wherein the structure comprising a
plurality of first structures extending in a

horizontal direction and aligned in a vertical direction, and two second structures extending in a vertical direction and arranged to put the plurality of first structures from both sides in the horizontal direction,

where both the first structures and the second structures are provided in one picture element.

5. A liquid crystal display device according to claim 4, wherein a height of the first structures is higher than that of the second structures.

6. A liquid crystal display device according to claim 1, wherein an opening portion for passing a light through is provided in the reflective electrode.

7. A liquid crystal display device comprising:
a first substrate;

a stepwise structure formed on the first substrate to have a stepwise cross section;

a resist film which is formed on the stepwise structure, and on a surface of which a wrinkle-like roughness extending in a substantially same direction as the stepwise structure is provided;

a reflective electrode formed on the resist film and having an roughness that follows the surface of the resist film;

a second substrate arranged to oppose to the first substrate; and

a liquid crystal sealed between the first substrate and the second substrate.

8. A liquid crystal display device according to claim 7, wherein a cross section of the stepwise structure, which is perpendicular to a longitudinal direction, is asymmetrical.

9. A liquid crystal display device according to claim 7, wherein an existence probability of an azimuth of the roughness on a surface of the reflective electrode is maximum in a horizontal direction.

10. A liquid crystal display device according to claim 7, wherein the stepwise structure is formed by a photoresist.

11. A liquid crystal display device according to claim 7, wherein at least a part of the stepwise structure is formed by same material as a wiring that supplies a signal to the reflective electrode.

12. A liquid crystal display device according to claim 7, wherein an opening portion for passing a light through is provided in the reflective electrode.

13. A method of manufacturing a liquid crystal display device comprising the steps of:

forming a gate bus line, a data bus line, and a thin film transistor connected to the gate bus line and the data bus line on a first substrate

respectively;

forming a photoresist film on an overall upper surface of the first substrate;

5 curing only a surface layer of the photoresist film;

forming a wrinkle-like roughness on a surface of the photoresist film by applying an annealing;

forming a reflective electrode, which is connected to the thin film transistor, on the photoresist film; and

10 arranging a second substrate to oppose to the first substrate, and sealing a liquid crystal between the first substrate and the second substrate;

15 wherein a structure having a linear shape or a shape formed by combining a plurality of straight lines is formed simultaneously with any one of the gate bus line and the data bus line.

20 14. A method of manufacturing a liquid crystal display device comprising the steps of:

forming a gate bus line, a data bus line, a thin film transistor connected to the gate bus line and the data bus line, and a stepwise structure having a stepwise cross section on a first substrate

25 respectively;

forming a photoresist film on an overall upper surface of the first substrate;

curing only a surface layer of the photoresist film;

forming a wrinkle-like roughness on a surface of the photoresist film by applying an annealing;

5 forming a reflective electrode on the photoresist film; and

arranging a second substrate to oppose to the first substrate, and sealing a liquid crystal between the first substrate and the second substrate;

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wherein at least a part of the stepwise structure is formed simultaneously with at least one of the gate bus line and the data bus line.

15 15. A method of manufacturing a liquid crystal display device according to claim 14, wherein the stepwise structure is formed by the photoresist.

16. A method of manufacturing a liquid crystal display device comprising the steps of:

forming a first conductor film on a first substrate, and then forming a gate bus line and a first pattern by patterning the first conductor film;

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forming a first insulating film on an overall upper surface of the first substrate;

25 forming a semiconductor film acting as an active layer of a thin film transistor on the first insulating film;

forming a second conductor film on the first insulating film, and then forming a source electrode and a drain electrode of the thin film transistor, a data bus line connected to the drain electrode, and
5 a second pattern having a width narrower than the first pattern and formed to overlap with the first pattern by patterning the second conductor film;

forming a second insulating film on an overall upper surface of the first substrate;

10 forming a photoresist film on the second insulating film;

curing only a surface layer of the photoresist film;

15 forming a wrinkle-like roughness on a surface of the photoresist film by applying an annealing;

forming a reflective electrode on the photoresist film; and

20 arranging a second substrate to oppose to the first substrate, and then sealing a liquid crystal between the first substrate and the second substrate.